

DISCUSSION OF THE AMENDMENT

Claim 1 has been amended by deleting that the modification of block copolymer (I) is not a reaction of a compound containing the functional group with a polymerization initiator used to prepare the block copolymer (I); by incorporating the subject matter of Claims 2, 23 and 24 therein; and as supported in the specification at page 12, lines 1-2. Claims 2, 11, 12, 14, 16, 23 and 24 have been canceled.

No matter is believed to have been added by the above amendment. Claims 1, 3-10, 13, 15 and 25 are now pending in the application. Of these claims, Claims 5-10 stand withdrawn from consideration.

REMARKS

The rejection of Claims 1-4, 11-16 and 23-25 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as unpatentable over JP 2002-060500 (Nakamura et al), is respectfully traversed.

As recited in above-amended Claim 1, an embodiment of the present invention is a thermoplastic polymer composition comprising the following components (A), (B), and (C): ethylene-vinyl alcohol copolymer (A); a polymer mixture (B) composed of a block copolymer (I) and a rubber softener (II), wherein the block copolymer (I) comprises an unmodified block copolymer and a modified block copolymer, the unmodified block copolymer mainly comprises a vinyl aromatic polymer block and a hydrogenated, conjugated diene polymer block, the modified block copolymer is a block copolymer which may be hydrogenated, the block copolymer mainly comprising a vinyl aromatic polymer block and a conjugated diene polymer block and being obtained by radical-addition of α,β -unsaturated carboxylic acid and/or a derivative thereof to part of the unmodified block copolymer of block copolymer (I); and a polyolefin resin (C), wherein the following four conditions are satisfied: the ratio of [A]:[B] is in the range of 10:90 to 50:50, the ratio of [I]:[II] is in the range of 30:70 to 90:10, the ratio of ([A] + [B]):[C] is in the range of 100:0 to 100:30, the ratio of [the unmodified block copolymer]:[the modified block copolymer] is in the range of 90:10 to 20:80, when the blending amount of component (A) in the thermoplastic polymer composition is denoted by [A] parts by weight, the blending amount of component (B) is denoted by [B] parts by weight, the blending amount of component (C) is denoted by [C] parts by weight, the blending amount of block copolymer (I) in component (B) is denoted by [I] parts by weight, and the blending amount of rubber softener (II) is denoted by [II] parts by weight, and the blending amount of unmodified or modified block copolymer is denoted by [the unmodified block copolymer] or [the modified block copolymer] parts by weight,

wherein the modified block copolymer has been modified at a modification ratio of 0.05 wt.% or higher and 20 wt.% or less, so as to have a functional group capable of reacting with the ethylene - vinyl alcohol copolymer (A), the ISO type A hardness of the composition is not less than 30 and not higher than 90, and the oxygen permeation coefficient is $20,000 \text{ mL} \cdot 20\mu\text{m}/\text{m}^2 \cdot \text{day} \cdot \text{atm}$ or less, and wherein the ethylene-vinyl alcohol copolymer (A) is in the form of particles that are dispersed in layers in a matrix comprising polymer mixture (B) and polyolefin resin (C).

Nakamura et al discloses a thermoplastic polymer composition obtained by subjecting an ethylene/vinyl alcohol based copolymer, an elastomer having a functional group capable of reacting with a crosslinking agent, and a crosslinking agent to dynamic crosslinking treatment under melting conditions. The elastomer may be a block copolymer having an aromatic vinyl compound block and a diene compound block. However, Nakamura et al fails to disclose or suggest that the block copolymer is subjected to modification by radical-addition of α,β -unsaturated carboxylic acid and/or a derivative thereof. Nakamura et al merely discloses that the block copolymer reacts with the crosslinking agent.

In addition, the elastomer is dispersed in the ethylene/vinyl alcohol copolymer, and thus, Nakamura et al's polymer composition has a sea/island structure opposite to that of the presently-claimed invention. Example 4 of Nakamura et al, which the Examiner relies on, is an example of such structure.

In Example 4, an ethylene-vinyl alcohol copolymer, modified SEBS, process oil and a crosslinking agent are premixed, then fused and kneaded at 200°C for dynamic crosslinking, and then subjected to press-forming. The modified SEBS and process oil are dispersed in an ethylene-vinyl alcohol copolymer matrix, rather than the opposite.

The thermoplastic polymer composition of Example 4 thus has less rubber-elasticity, as compared with that of the present invention.

In the presently-claimed invention, on the other hand, as recited at the end of Claim 1, a relatively hard ethylene-vinyl alcohol copolymer is dispersed in a matrix formed from the rubber-elastic block copolymer and the rubber softener, and hence the thermoplastic polymer composition of the present invention has significant rubber-elastic property as a whole. The polymer composition of Nakamura et al, on the other hand, as discussed above, is considered to have a relatively low rubber-elastic property.

For all the above reasons, it is respectfully requested that the rejection be withdrawn.

The rejection of Claims 1-4, 11-16 and 23-25 under 35 U.S.C. § 103(a) as unpatentable over JP 2002-146217 (equivalent to US 2003/0018114) (Tai et al et al) in view of JP 04-292647 (Hibi et al), is respectfully traversed.

Tai et al discloses a resin composition having an oxygen scavenging function, and which comprises a gas barrier resin (A), a thermoplastic resin (B) other than (A), and a compatibilizer (C). Thermoplastic resin (B) is preferably represented by formula (I) therein, which is preferably a block copolymer comprising an aromatic vinyl unit and a diene compound. Various functional groups can be introduced into the block copolymer.

However, Tai et al fails to disclose or suggest that the block copolymer is subjected to modification by radical addition of α,β -unsaturated carboxylic acid and/or a derivative thereof, and that the block copolymer can react with modified ethylene-vinyl acetate copolymer.

As discussed above, the thermoplastic polymer composition of the present invention has a sea/island structure in which a relatively hard ethylene-vinyl alcohol copolymer is dispersed in a matrix formed from the elastic block copolymer and the rubber softener. On the other hand, in Tai et al, like in Nakamura et al, the sea/ island structure is reversed from that of the present invention.

Hibi et al discloses a hot-melt forming composition comprising at least one hydrogenated styrene-butadiene or hydrogenated styrene-isobutylene copolymer, or modified copolymer thereof with COOH or OH groups; a modified product of ethylene-vinyl acetate copolymer; and an adhesive or plasticizer.

The Examiner holds that it would have been obvious to add the plasticizer of Hibi et al to Tai et al.

In reply, even if one skilled in the art were to combine the references as suggested by the Examiner, the result would not be the presently-claimed invention. In addition, Hibi et al does not disclose how their COOH or OH groups are introduced into their modified copolymer, nor does Hibi et al disclose modification by radical-addition of α,β -unsaturated carboxylic acid and/or a derivative thereof, or the reaction with the ethylene-vinyl alcohol copolymer.

For all the above reasons, it is respectfully requested that the rejection be withdrawn.

The rejection of Claims 1-4, 11-16 and 24-25 under 35 U.S.C. § 103(a) as unpatentable over U.S. 5,332,784 (Shiraki et al), is respectfully traversed.

Shiraki et al discloses terminal modification of a block copolymer by bonding a terminal-treating agent to the polymer terminal which is obtained by treating the active terminal of the block copolymer. The block copolymer comprises conjugated dienes and vinyl aromatic hydrocarbon compounds which is obtained by use of at least one member selected from alkali metals and organoalkali metals as a polymerization initiator, wherein the terminal-treating agent is a compound containing at least one functional group selected from a Markush group thereof (column 5, line 29ff). There is no disclosure or suggestion in Shiraki et al to in any way modify the terminal-modified block copolymer of Shiraki et al.

In the presently-claimed invention, the block copolymer is subjected to modification by radical-addition of α,β -unsaturated carboxylic acid and/or a derivative thereof. The

position of a reaction site is limited to a side chain. Therefore, the block copolymer is different from a terminal-modified block polymer of Shiraki et al.

In addition, Shiraki et al fails to disclose or suggest not only the use of an unmodified block copolymer and a modified block copolymer at a predetermined ratio, but also the predetermined modification ratio of the modified block copolymer.

For all the above reasons, it is respectfully requested that the rejection be withdrawn. The rejection of Claims 1-4, 11-16 and 23-25 under 35 U.S.C. § 103(a) as unpatentable over US 2003/0162897 (Masuda), is respectfully traversed. The named inventor of Masuda is Haruhisa Masuda, who is one of the named coinventors herein. The present invention is necessarily, at least in part, Masuda's own work. An inventor's own work cannot be used against him absent a statutory bar. *In re Katz*, 687 F.2d 450, 215 USPQ 14 (CCPA 1982) (copy enclosed).

The earliest publication date of Masuda, which is in August, 2003, is less than a year before the US filing date herein of December 8, 2003. Thus, Masuda is not prior art herein. Nevertheless, Masuda neither discloses nor suggests the present invention.

Masuda discloses a composition comprising a modified block copolymer, an ethylene-vinyl alcohol copolymer, a plasticizer, propylene, and a crosslinking agent, which is an indispensable component, which composition is subjected to dynamic crosslinking. As described therein [0043], "[t]he thermoplastic polymer composition obtained in the way mentioned above has a structure where the modified block copolymer (II) crosslinked with the amine crosslinking agent (III) is dispersed in a matrix comprising the ethylene-vinyl alcohol copolymer (I). Thus, like Nakamura et al and Tai et al, *supra*, the structure of Masuda is opposite that of the present invention.

In addition, Masuda fails to disclose or suggest not only the use of an unmodified block copolymer and a modified block copolymer at a predetermined ratio, but also the predetermined modification ratio of the modified block copolymer.

For all the above reasons, it is respectfully requested that the rejection be withdrawn.

The rejection of Claims 1-4, 11-16 and 23-25 under 35 U.S.C. § 112, first paragraph, is respectfully traversed. Indeed, the rejection is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that this rejection be withdrawn.

Applicants note that the initialed Form PTO 1449 that was attached to the Office Action dated June 29, 2006 omitted initials for document AV. Accordingly, **submitted herewith** is a copy of the original of the uninitialed Form. The Examiner is respectfully requested to initial the Form for document AV, and include a copy thereof with the next Office communication.

Submitted herewith also is a new Information Disclosure Statement (IDS). The Examiner is respectfully requested to initial the Form PTO 1449, and include a copy thereof with the next Office communication.

All of the presently-pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

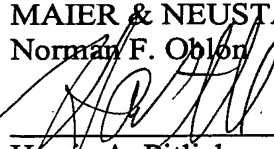
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ATTY DOCKET NO.
246245US0

SHEET 1 OF 1

SERIAL NO.
10/728,991

LIST OF REFERENCES CITED BY APPLICANT

APPLICANT

Haruhisa MASUDA, et al.

FILING DATE

December 8, 2003

GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	4,429,076	01/31/1984	A. SAITO, et al.,			
	AB	2002/0160137 A1	10/31/2002	R. K. VARMA			
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
	AN	1 338 621	08/27/2003	EUROPE		
	AO	1-313552	12/19/1989	JAPAN (with English Abstract)		X
	AP	0 853 096	07/15/1998	EUROPE		
	AQ	1 203 790	05/08/2002	EUROPE		
	AR	WO 02/064677	08/22/2002	WIPO		
	AS	2003-238758	08/27/2003	JAPAN (with English Abstract)		X
	AT	1 197 520	04/17/2002	EUROPE		
	AU	1 086 991	03/28/2001	EUROPE		
	AV	0 814 126	12/29/1997	EUROPE		

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	
	AX	
	AY	
	AZ	

☐ Additional References sheet(s) attached

Examiner

Date Considered

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

COPY

In re Katz, 215 USPQ 14 (CCPA 1982)

**In re Katz
(CCPA)
215 USPQ 14**

**Decided Aug. 27, 1982
No. 82-521
U.S. Court of Customs and Patent Appeals**

Headnotes

PATENTS

1. Court of Customs and Patent Appeals -- Issues determined -- Ex parte patent cases (§ 28.203)

CCPA treats Section 102(g) rejection that Board of Appeals did not specifically reverse as having been affirmed.

2. Interference -- Priority (§ 41.70)

Section 102(g) embodies principle that to be entitled to patent one must be first to have made invention; however, prior conception of invention by another does not defeat one's right; no barrier is created by that section unless another has either actually reduced invention to practice or has constructively reduced it to practice by filing patent application.

3. Interference -- Priority (§ 41.70)

Interference -- Reduction to practice -- Constructive reduction (§ 41.755)

Unlike filing of patent application, publication of article is not constructive reduction to practice of subject matter described in it; therefore, disclosure in publication does not prove that

any "invention" within meaning of Section 102(g) has ever been made by anyone.

4. Patentability -- Anticipation -- Patents -- In general (§ 51.2211)

Patentability -- Anticipation -- Publications -- In general (§ 51.2271)

Interpretation of Section 102(a) that would make prior patent or printed publication "prior art" even though disclosure is that of applicant's own work would negate one year period afforded under Section 102(b) during which inventor is allowed to perfect, develop, and apply for patent on his invention and publish descriptions of it if he wishes.

5. Patentability -- Anticipation -- In general (§ 51.201)

One's own work is not prior art under Section 102(a) even though it has been disclosed to public in manner or form that otherwise would fall under Section 102(a); disclosure to public of one's own work constitutes bar to grant of patent claiming subject matter so disclosed, or subject matter obvious from it, only when disclosure occurred more than one year prior to application's date, that is, when disclosure creates one-year time bar, to application under Section 102(b); one's own invention, whatever form of disclosure to public, may not be prior art against oneself, absent statutory bar.

6. Patentability -- Anticipation -- Publications -- In general (§ 51.2211)

Disclosure of publication that occurred less than one year before appellant's application comes within scope of Section 102(a) only if description is not of appellant's own work.

7. Patentability -- Anticipation -- Publications -- In general (§ 51.2211)

Authorship of article by itself does not raise presumption of inventorship with respect to subject matter disclosed in article; thus, co-authors may not be presumed to be co-inventors merely from fact of co-authorship; on other hand, when PTO is aware of printed publication that describes subject matter of claimed invention and is published before application is filed (only date of invention on which it must act in absence of other proof), article may or may not raise substantial question whether applicant is inventor; for example, if author, whether he is applicant or not, specifically states that he is describing applicant's work, no question at all is raised; content and nature of printed publication, as well as circumstances surrounding its publication, not merely its authorship, must be considered.

8. Patentability -- Anticipation -- Publications -- In general (§ 51.2211)

Although submission of disclaiming affidavits or declarations by other authors of article that does not tell anything specific about inventorship and that reports on scientific work in which applicant and other authors have been engaged in some capacity would have ended inquiry into whether it can be reasonably concluded that applicant is sole inventor, they are not required by statute or Rule 132; what is required is reasonable showing supporting basis for applicant's position.

9. Applicants for patent -- In general (§ 14.1)

Patentability -- Anticipation -- Publications -- In general (§ 51.2211)

Joint inventorship cannot be inferred, in face of sworn statements to contrary, from article authored by applicant and students working under applicant's direction and supervision.

Particular patents -- Immunological Tolerance Induction

Katz, Induction of Immunological Tolerance, rejection of claims 1, 5, 17, and 18 reversed.

Case History and Disposition:

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Appeal from Patent and Trademark Office Board of Appeals.

Application for patent of David Harvey Katz, Serial No. 937,574, division of application, Serial No. 764,586, filed Feb. 3, 1977. From decision rejecting claims 1, 5, 17, and 18, applicant appeals. Reversed; Miller, Judge, dissenting with opinion.

Attorneys:

John H. Lynn and Grant L. Hubbard, both of Newport Beach, Calif., for appellant.

Joseph F. Nakamura and Gerald H. Bjorge for Patent and Trademark Office.

Markey, Chief Judge, and Rich, Baldwin, Miller, and Nies, Associate Judges.

Opinion Text

Opinion By:

Nies, Judge.

This appeal is from the decision of the Patent and Trademark Office (PTO) Board of Appeals (board) sustaining rejection of claims 1, 5, 17, and 18, all remaining claims in application Serial No. 937,574 for "Induction of Immunological Tolerance." The subject application is a divisional application of application Serial No. 764,586, filed February 3, 1977, and is entitled to that filing date. The claims were rejected because of a description of the subject matter of the invention in a publication dated June 1976, which appellant, however, asserts is a description of his own work. The board was unpersuaded by appellant's declarations to that effect and sustained the rejection. We reverse.

Background

In June, 1976, eight months before appellant's effective filing date, an article coauthored by Nicholas Chiorazzi, Zelig Eshhar and appellant was published in the Proceedings of the National Academy of Science, U.S.A., Vol. 73, No. 6, pp. 2091-95. There is no dispute that the article (Chiorazzi et al.) fully describes the claimed invention.

Along with his divisional application, appellant filed a declaration in which he declared that:

He is the sole inventor of the subject matter described and claimed in the United States Patent Application Serial No. 764,586, filed February 3, 1977, entitled, INDUCTION OF IMMUNOLOGICAL TOLERANCE, which subject matter is disclosed and claimed in part in the divisional application with which this declaration is submitted.

He is co-author of a report in the proceedings of the National Academy of Science, U.S.A., Volume 73, No. 6, Pages 2091-2095, June, 1976, communicated to the National Academy of Science by Albert H. Coons, a member of said Academy, on March 8, 1976, *that he is the sole inventor of the subject matter which is disclosed in said publication in the proceedings of the National Academy of Science and disclosed and claimed in the application submitted herewith* . [Emphasis ours.]

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The other authors of the publication, Nicholas Chiorazzi and Zelig Eshhar were students working under the direction and supervision of the inventor, Dr. David H. Katz, and while co-authoring the publication, are not co-inventors of the subject matter

described therein.

The Examiner's Rejections

In his first Official Action, the examiner stated:

Claims 1, 5, 17 and 18 are rejected under 35 USC 102(g) as anticipated by Chiorazzi et al. * * * Applicant's declaration * * * is entirely ineffective in overcoming the rejection of this nature and is considered to be nothing more than the self-serving statement.

In his Final Official Action, the examiner adhered to the §102(g) rejection adding:

[T]here is no evidence of record which makes it clear that appellant is the *sole* inventor of the *claimed* invention * * *. Where a reference is from a collection of authors, it must be assumed that all authors contributed equally even though it is recognized that sometimes individuals involved only with assay and testing features of the invention and * * * not involved in the conceptual [sic] aspect of the research are included as an author to a particular reference. There is not sufficient evidence of record to show that applicant is the sole inventor of the claimed invention.

* * * The publication date as well as communication date of the reference, both dates being prior to applicant's filing date, [are] clear evidence to [sic] prior invention. [Emphasis in original].

To overcome the rejection, the examiner required that appellant either (1) amend his application to include the other authors as coinventors, or (2) file affidavits from the other authors "disclaiming the invention claimed." Appellant chose to appeal rather than comply with either requirement.

The Board's Affirmance

While the board sustained the examiner's rejection, it did so on the following ground:

The Chiorazzi et al. article, as pointed out by the examiner and as acknowledged by appellant, fully describes the presently claimed therapeutic immunosuppressive agent and the method of preparing same. In view of the fact that the article was published some eight months prior to the effective filing date of the present application *and since the authors of the article are legally another within the meaning of Section 102(a)*, we are satisfied that the examiner has clearly established a prima facie case of lack of novelty of the presently claimed therapeutic agent and method.

Appellant, who is a coauthor of the Chiorazzi article, has stated under oath that he is the sole inventor of the subject matter herein claimed and described in the article, and that the other authors, namely, Chiorazzi and Eshhar, are not coinventors but were simply students working under his direction and supervision. In appellant's view, this declaration

constitutes legally acceptable evidence and, in the absence of evidence to the contrary, is sufficient to establish that he is the sole inventor of the subject matter in issue.

However, we do not find this declaration, standing alone, sufficient to establish that Katz is the sole inventor and thus remove the Chiorazzi article as a reference against the presently claimed subject matter . Although appellant may be of the opinion that he is the sole inventor, such a view may not be shared by the coauthors of this article. Coauthors Chiorazzi and Eshhar may, in fact, be of the opinion that they are, at the very least, coinventors of the subject matter described in the article and claimed herein. Even though authorship may not conclusively establish inventorship, it is reasonable to infer that such a relationship exists . Appellant's unsupported statement, even though under oath, does not convince us otherwise. In our view, disclaiming affidavits or declarations by the other authors are required in order to support appellant's contention that he is the sole inventor of the subject matter described in the Chiorazzi article and claimed here. [Emphasis ours.]

The board adhered to its position on rehearing.

Opinion

[1] Because the board did not specifically reverse the §102(g) rejection, we treat it as having been affirmed. 37 CFR 1.196(a). Fur

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ther, since appellant does not contend that the board's reliance on §102(a) is a new ground for rejection, we will also consider that section. 37 CFR 1.196(b). Appellant does suggest that the board apparently confused §102(e) with §102(a) since §102(a) makes no reference to "another" in the context of authorship of a publication. However, we disagree that the board was "confused" in this respect for reasons which will become apparent and, accordingly, do not find it necessary to consider §102(e) separately.

35 USC 102(g)

[2] Section 102(g) reads:

A person shall be entitled to a patent unless --

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

This section of the statute embodies the principle that to be entitled to a patent one must be the

first to have made the invention. However, prior conception of the invention by another does not defeat one's right. No possible barrier is created by §102(g) unless another has either actually reduced the invention to practice or has constructively reduced it to practice by filing a patent application.

[3] We specifically reject the examiner's position that the publication of the subject article provides even a tenuous ground for rejection under 35 USC 102(g). Unlike the filing of a patent application, the publication of an article is not deemed a constructive reduction to practice of the subject matter described therein. In *re Schlittler*, 43 CCPA 986, 989, 234 F.2d 882, 884, 110 USPQ 304, 305-06 (1956). Therefore, disclosure in a publication does not prove that any "invention" within the meaning of 102(g) has ever been made by anyone. The examiner's ground for rejection must, therefore, fail.

35 USC 102(a)

Section 102(a) reads:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent.

[4] It may not be readily apparent from the statutory language that a printed publication cannot stand as a reference under §102(a) unless it is describing the work of another. A literal reading might appear to make a prior patent or printed publication "prior art" even though the disclosure is that of the applicant's own work. However, such an interpretation of this section of the statute would negate the one year period afforded under §102(b) ¹ during which an inventor is allowed to perfect, develop and apply for a patent on his invention and publish descriptions of it if he wishes. *Illinois Tool v. Solo Cup Co.*, 461 F.2d 265, 172 USPQ 385 (CA 7), cert. denied, 407 U.S. 916 (1972).

[5] Thus, one's own work is not prior art under §102(a) even though it has been disclosed to the public in a manner or form which otherwise would fall under §102(a). Disclosure to the public of one's own work constitutes a bar to the grant of a patent claiming the subject matter so disclosed (or subject matter obvious therefrom) only when the disclosure occurred more than one year prior to the date of the application, that is, when the disclosure creates a one-year time bar, frequently termed a "statutory bar," to the application under §102(b). As stated by this court in *In re Facius*, 56 CCPA 1348, 1358, 408 F.2d 1396, 1406, 161 USPQ 294, 302 (1969), "But certainly *one's own invention* , whatever the form of disclosure to the public, may not be prior art against oneself, *absent a statutory bar* ." [Emphasis in original.] ²

[6] Since the publication in this case occurred less than one year before appellant's application, the disclosure comes within the scope of §102(a) only if the description is not of appellant's own work.

The specific question present in this appeal is essentially an evidentiary one, namely, the sufficiency of applicant's showing to establish that the subject disclosure was his original work, and his alone. ³ We conclude that appellant's declaration is sufficient in this case to overcome the rejection.

[7] As an initial matter, we hold that authorship of an article by itself does not raise a *presumption* of inventorship with respect to the subject matter disclosed in the article. Thus, co-authors may not be *presumed* to be coinventors merely from the fact of co-authorship. On the other hand, when the PTO is aware of a printed publication, which describes the subject matter of the claimed invention and is published before an application is filed (the only date of invention on which it must act in the absence of other proof), the article may or may not raise a substantial question whether the applicant is the inventor. For example, if the author (whether he is the applicant or not) specifically states that he is describing the work of the applicant, no question at all is raised. The content and nature of the printed publication, as well as the circumstances surrounding its publication, not merely its authorship, must be considered.

What we have in this case is ambiguity created by the printed publication. ⁴ The article does not tell us anything specific about inventorship, and appellant is only one of three authors who are reporting on scientific work in which they have all been engaged in some capacity at the Harvard Medical School. It was incumbent, therefore, on appellant to provide a satisfactory showing which would lead to a reasonable conclusion that he is the sole inventor.

[8] The board and the examiner held that "disclaiming affidavits or declarations by the other authors are required to support appellant's position that he is, in fact, the sole inventor of the subject matter described in the article and claimed herein." This was clear error. Submission of such affidavits or declarations would have ended the inquiry, but we do not agree that they are required by the statute or Rule 132. What is required is a reasonable showing supporting the basis for the applicant's position.

In this case, appellant reaverred in his declaration that he is the sole inventor of the subject matter described and claimed in his application and also that disclosed in the publication of proceedings of the National Academy of Science. We do not view this averment as a mere pro forma restatement of the oath in his application.

[9] In the declaration, appellant provides the explanation that the co-authors of the publication, Chiorazzi and Eshhar, "were students working under the direction and supervision of the inventor, Dr. David H. Katz." This statement is of significance since it provides a clear alternative conclusion to the board's inference that their names were on the article because they were coinventors. As acknowledged by the examiner, the names of individuals may be given as authors of a scientific report who are "involved only with assay and testing features of the

invention." Appellant's explanation is, thus, consistent not only with the content of the article but with the nature of the publication. On the record here, the board should not have engaged in further speculation as to whether appellant's view was shared by his co-authors but rather should have accepted that Chiorazzi and Eshhar were acting in the capacity indicated, that is, students working *under the direction and supervision of appellant*. From such a relationship, joint inventorship cannot be inferred in the face of sworn statements to the contrary.

Thus, we conclude that in view of the totality of circumstances, appellant has made a sufficient showing that the cited publication discloses his invention. Accordingly, we *reverse* the decision of the board.

Reversed.

Footnotes

Footnote 1. 35 USC 102(b) provides:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, *more than one year prior to the date of the application* for patent in the United States. [Emphasis added.]

Footnote 2. Since any valid rejection is necessarily a "statutory bar," in a generic sense, the expression "statutory bar" must be understood here as meaning "statutory *time* bar" under 35 USC 102(b).

Footnote 3. Such showing can be made under Rule 132, 37 CFR 1.132, which provides:

When any claim of an application is rejected on reference to a * * * printed publication * * * affidavits or declarations traversing [the reference] * * * may be received.

Footnote 4. The solicitor notes that in the application, there is an inconsistency in that the subject application and its parent by a sole inventor refer to previous work done by "one of the inventors." While adding to the ambiguity, this statement, which appellant's attorney represents was his error in draftsmanship, does not control over appellant's subsequent proofs.

Dissenting Opinion Text

Dissent By:

Miller, Judge, dissenting.

The board correctly held that it is reasonable to infer coinventorship from coauthor

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ship. This inference is sufficient to justify a determination by the PTO that the reference printed publication ("Chiorazzi et al.") in question is prior art under 35 USC 102 as applied against an application for patent filed by one of the coauthors. ¹ In re Facius, 56 CCPA 1348, 408 F.2d 1396, 161 USPQ 294 (1969); In re Mathews, 56 CCPA 1033, 408 F.2d 1393, 161 USPQ 276 (1969); In re Land, 54 CCPA 806, 368 F.2d 866, 151 USPQ 621 (1966). Although all of the latter opinions by this court have involved prior patents issued to different inventive entities, the board has established a line of cases involving only printed publications. In re Magner, 133 USPQ 404 (1961); In re Seaborg, 131 USPQ 202 (1960); In re Hirschler, 110 USPQ 384 (1952); In re Layne, 63 USPQ 17 (1943). Such cases are analogous to the instant appeal, and, contrary to appellant's arguments, are consistent.

In Layne, the board agreed with the examiner that an affidavit by the applicant, stating that an article published by another was made with the applicant's consent, was not sufficient to overcome the examiner's rejection. The board stated:

[I]t is stated in the brief that counsel can obtain an affidavit of the writer of the article in the publication that he obtained his information from the deponent. It is our view that this affidavit of the writer of the article, H. Lee Flood, should be furnished to afford complete and satisfactory proof of the identity of the article disclosed in the publication.

* * *[U]ntil the affidavit referred to is furnished, the rejection on the publication in the Petroleum Engineer appears proper. For this reason, the rejection is affirmed. It is recommended, however that if a proper affidavit of H. Lee Flood is promptly submitted, the claims be allowed.

63 USPQ at 19. Layne differs from the present case in that the inventor in Layne was not named as a coauthor; here, Katz was one of the named coauthors.

When presented with an examiner's rejection utilizing a publication coauthored by the applicant and his laboratory assistant, the board in Hirschler refused to sustain the rejection in view of the submission of an affidavit disclaiming inventorship which was executed by the lab assistant. The board said:

[A]n affidavit which points out that affiant took no part in writing the article and was not the inventor of the subject matter described in the article, but was merely listed as coauthor of the article in order to receive credit for having collaborated on the research program under the directions of present appellant, is properly acceptable and * * * the article may be considered the sole work of present appellant. Since the article is not a

statutory bar, it is not effective as a reference.

110 USPQ at 387. Here, of course, there are no disclaiming affidavits filed by the co-authors and alleged noninventors.

Appellant quotes the following statement of the board in Seaborg explaining that a Rule 131 affidavit was unnecessary:

The issue is not one of priority but attribution of inventorship, the examiner evidently having in mind the possibility that Wahl might be a joint inventor. But we would emphasize that the bare fact that Wahl is the literary co-author is not evidence of joint inventorship.

131 USPQ at 203. This statement is taken out of context, the board actually concluding:

On the question of originality any evidence convincing to the Office may be accepted. The evidence here is in the form of an affidavit by joint author Wahl stating that he is not the inventor of the subject matter claimed herein. In absence of any adversity of interest there seems to be little basis for challenging this affidavit. In fact, the examiner states on page 4 of his answer that he "has no doubt that Seaborg is the sole inventor of the subject matter claimed."

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Under these circumstances we see no valid basis for maintaining the rejection on the Seaborg and Wahl article.

131 USPQ at 203. As is apparent, a disclaiming affidavit was filed by the coauthor and noninventor, which clearly distinguishes Seaborg from the present case. Also, the board justified its position, at least in part, on the basis that the affiant had no "adversity of interest."

In *Magner*, three of four applicants had published an article disclosing their invention less than a year prior to the application's filing date. The three coauthors and coinventors filed an affidavit declaring that the fourth applicant was also a coinventor, viz., that he "and themselves mutually participated in the conception, research and reduction to practice of the invention claimed * * *" and that the article "was prepared from the research records of themselves and the fourth coinventor." 133 USPQ at 405. The examiner refused to accept this affidavit because an explanatory affidavit by the fourth coinventor had not been presented. The board refused to sustain the examiner's rejection, stating:

The article is by three of the four joint inventors; we see no necessity for an affidavit under Rule 131 as no question of priority is involved. The question is as to attribution of inventorship -- an explanation of the relation of the publication by three of the joint inventors to the application of all four of them. We think that the affidavit

satisfies this requirement. On the question of originality any competent evidence convincing to the Office may be accepted. *There is no reason to doubt the statement of the three joint inventors as to the participation of the fourth inventor as this statement is of no benefit to them* . [Emphasis supplied.]

Id. This is unlike the present case, where the appellant's affidavit is favorable to his own interest and adverse to the interests of coauthors Chiorazzi and Eshhar.

Appellant argues that the board's reasoning in *In re McGuckian*, 202 USPQ 398 (1975), is somehow analogous and supports his position. McGuckian, however, involved the use of a typical 37 CFR 1.131 affidavit filed to overcome the examiner's application of a United States Patent as a reference under 35 USC 102(e). The examiner determined that the Rule 131 showing, which included three declarations, two by applicant and one by his attorney, and fifteen exhibits, was not sufficient to meet the requirements of the rule. The board held that the Rule 131 showing was sufficient and indicated that the examiner was required to accept as true the applicant's sworn statements that "'he is the inventor'; that 'he conceived and reduced to practice the invention'; and the work evidenced by Exhibits 1 through 15 'was made through his efforts and others at his request on his behalf.'" In this context, as quoted by Katz, the board said:

It is neither the Examiner's function nor our function under such circumstances to divine the role if any played by someone who is a complete stranger to the proceeding. It is only in some inter partes proceeding, totally lacking here, where all interested parties are represented and the fundamental safeguards of direct examination and cross-examination are possible, that the question of inventorship and dates of invention can be explored in the manner attempted by the Examiner here.

202 USPQ at 399. However, McGuckian offers no support to appellant. That case was concerned only with the adequacy of the applicant's Rule 131 showing; whereas, appellant here has not attempted to comply with the requirements of Rule 131.

Essentially, appellant argues that this court either should hold that coauthorship is not evidence of, or a basis for inferring, coinventorship or should accept without question an affidavit by an applicant which simply states that he is the sole inventor. To the contrary, I would hold that coauthorship is evidence of coinventorship and creates an inference thereof which is sufficient to establish a prima facie case under either 35 USC 102(a), (f), or (g) that the Chiorazzi et al. article is prior art; ² further, that appellant's declaration does not rebut the prima facie case. ³

As to the showing that would be sufficient to overcome the government's prima facie case, it is to be noted that inventorship is a matter of law which depends upon factual matters underlying the development of the invention, including the contribution by all parties involved with the *claimed* invention. See *Linkow v. Linkow*, 517 F.2d 1370, 186 USPQ 223 (CCPA 1975); *Hedgewick v.*

Akers, 497 F.2d 905, 182 USPQ 167 (CCPA 1974). As related earlier, the board's decision to accept or reject affidavits affecting a nonaffiant's rights in an invention has been predicated upon whether the affiant's statements are adverse to the nonaffiant's interest. Because the affiant, Katz, seeks to adversely affect the interests of the coauthors Chiorazzi and Eshhar, the PTO has refused to accept his affidavit as determinative, leaving him a choice of submitting affidavits by Chiorazzi and Eshhar disclaiming any interest in the invention or making a showing of facts in existence prior to the date of publication of the Chiorazzi et al. article sufficient to prove that inventorship of the claimed invention lies solely with Katz. ⁴

The majority accepts the Katz declaration, which simply concludes that Katz is the sole inventor and that his coauthors were students in his employ. Katz has not provided *either* a recitation of facts to support these conclusions, viz., type of supervision in the lab, circumstances resulting in his conception, instructions to his coauthors, participation and performance by his coauthors, etc *or* a recitation of facts from which the PTO could conclude that his coauthors played no role in the conception of the invention. Joint publication of this article in the names of Katz, Chiorazzi, and Eshhar, without explanation, places a cloud upon the sole application of Katz and requires that Katz affirmatively clear the air. This he has not done.

In view of the PTO's limited resources for processing in excess of 100,000 patent applications a year, it is disappointing that a majority of this court cannot see its way to extend a helping hand to the effort of a vital administrative agency to protect the integrity of the patent system, with minimal inconvenience to an applicant.

Footnotes

Footnote 1. As argued by the Solicitor, this printed publication is also evidence that "the invention was known or used by others in this country * * * or described in a printed publication in this * * * country, before the invention thereof by applicant" under 35 USC 102(a) and, as held by the examiner, is evidence that "before the applicant's invention thereof the invention was made in this country by another" under 35 USC 102(g). The "others" in 102(a), "not himself" in 102(f), and "another" in 102(g) are terms that serve to distinguish between different inventive entities. Contrary to the majority opinion's view of section 102(g), the Katz et al. article indicates that the invention was actually reduced to practice; appellant did not contest the examiner's rejection on this basis. In this case, Katz, the applicant, is one inventive entity and his effective date of invention, as the record now stands, is his application filing date. Collectively, Katz, Chiorazzi, and Eshhar comprise a second inventive entity. See CHISUM ON PATENTS §3.08[2](a).

Footnote 2. See note 1, *supra*.

Footnote 3. If Chiorazzi and Eshhar were merely involved in assembling data, conducting experiments, testing the invention, or reporting the inventor's activities, it is not unreasonable to

require that this limited role be affirmed by them or Katz. After all, the resources of the PTO are limited and such information is readily available to appellant.

Footnote 4. See U.S. Patent & Trademark Office, Manual of Patent Examining Procedure §715.01(c) (4th Ed. Rev. 1980).

- End of Case -